

**From:** [Jessica Winter](#)  
**To:** [Eric Blischke/R10/USEPA/US@EPA](#); [Chip Humphrey/R10/USEPA/US@EPA](#)  
**Cc:** [Robert Neely](#)  
**Subject:** Re: EPA Comments on QEAFate Presentation  
**Date:** 05/26/2010 03:46 PM

---

Re: comment 12 in the pdf version sent to LWG, I'm not sure whose comment that was, but I think I may have a partial answer.

"It is unclear why PCB 126 and TBT were chosen for the sensitivity analysis; the the data are relatively sparse for both these chemicals. It's not clear why PCB 126 was used and not a homolog group, since that is what is being modeled. The lack of data in some areas can drive the SWAC and thus the initial conditions."

As I understand it, the part of the sensitivity analysis that was run for PCB 126 and TBT was specifically to look at the problem of sparse subsurface data. Since there wasn't enough data for those chemicals to get a good interpolation for initial sediment chemistry conditions in the subsurface, they wanted to try a range of initial conditions to see how much that would influence the model predictions. Slides 160-162 are just showing that increasing the subsurface TBT concentrations by factors of 10 and 100 doesn't change the model output very much. LWG didn't show us sensitivity analysis results for PCB 126 initial conditions, and I'm guessing that's because now that they're using the Aroclor conversion to homologs to supplement the PCB data, sparsity is no longer such a problem. That part of the presentation was a little confusing, though-- it was unclear why they mentioned PCB 126 at all.

Re: comment 3 on page 2, I'm not sure that hourly averages would be doable/meaningful since a lot of the inputs such as stormwater are monthly averages, right? Sediment fluxes are input daily, so even though the fate and transp model calculations take place on a timescale of < 1 minute, I don't think we'll be able to see effects of the tidal influence.

Re: comment 4 on page 2, I agree with this overall and would suggest that maybe in addition to your suggestion of calibrating using time-averaged sed concentrations, we could look at discrete-time, spatially-averaged concentrations over relatively small areas (perhaps the 1/2 mile segments you mention in comment 7). If the co-located data had equal variability between same-day pairs and pairs separated by 8 years, then it seems like it's going to be really hard to get anything meaningful out of temporal averaging within an 7-year calibration period. I'm hoping (but I don't know whether this is the case) that some of the spatial heterogeneity smooths itself out over 1/2 mile stretches.

Hope this makes sense-- let me know if you want me to clarify any of it. I will try to put together some suggestions for ways to do validation.

--

Jessica Winter  
NOAA Office of Response and Restoration  
7600 Sand Point Way, Bldg 4, Room 2117A  
Seattle, WA 98115  
Phone (206) 526-4540  
Fax (206) 526-6865  
[jessica.winter@noaa.gov](mailto:jessica.winter@noaa.gov)